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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,701	09/30/2005	Yukimasa Nagai	2611-0245PUS1	8259

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
MITCHELL, NATHAN A	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
06/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/551,701	NAGAI ET AL.	
	Examiner	Art Unit	
	NATHAN MITCHELL	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *76,77,81 and 82* is/are allowed.

6)☒ Claim(s) *37-75 and 78-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 37-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

One possible understanding of the term "802.11 standard" to one of ordinary skill in the art is that the term refers to an evolving standard (including future revisions). With this interpretation, its inclusion in claims 37 (lines 4, 8), 39 (line 2), 41 (line 4), 43 (line 2), 46 (lines 4, 8), 48 (line 2), 50 (line 4), 52 (line 2), 55 (lines 5, 9), 57 (line 2), 59 (line 4), 61 (line 2), 64 (lines 5 and 8), 66 (line 2), 68 (line 4) and 70 (line 2) renders the scope of those claims and their dependents indefinite as one of ordinary skill in the art would not know which revisions of the standard are encompassed by the claim. Absent evidence to the contrary, the examiner would be inclined to reject this interpretation and assume the reference to only refer to those revisions that would have been known to the applicant as of the filling. However the courts have consistently looked to the specification to construe the meaning of claims. “We cannot look at the ordinary meaning of the term...in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history." *Medrad, Inc. v. MRI Devices Corp. 401 F.3D 1313, 1319 (Fed. Cir. 2005).* Applicant gives guidance as to the meaning of “802.11 standard” in the specification. On page 8 lines 26-27 applicant more

or less gives an explicit definition: “IEEE 802.11 standard (a, b, e, f, g, h, i, or the like).” The inclusion of the phrase “or the like” supports the supposition that future revisions of the 802.11 standard are being claimed. To obviate the rejection, it is suggested to do one of the following: 1) delete that occurrence of "or the like" and similar instances occurring elsewhere in the specification, or 2) revise the claims to include a more explicit definition of the 802.11 standard.

Claim Objections

3. Claim 73 (line 4) is objected to because of the following informalities: “dividing” is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 73-75 and 78-80 rejected under 35 U.S.C. 103(a) as being unpatentable over DE 4130318 A1 to Schrodl in view of 2004/0141502 A1 to Corson et al.

For claim 73, Schrodl discloses

A method of transmission used in a transmission device transmitting a data frame by using a plurality of communication channels with different transmission rates (s6 is added effectively changes the information rates of the separate transmission lines), the method comprising:

a frame allotment step of diving one data frame corresponding to each of the plurality of the communication channels (transmission lines) so that transmission burst times are substantially equal for the plurality of communication channels (division into frames of roughly equal length see abstract).

For claim 73, Schrodl discloses all the subject matter of the claimed invention with the exception of the communication channels being wireless. In an analogous art, Corson et al. discloses a transmission device equipped with multiple physical layers (fig. 3). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Schrodl with those of Corson et al. by substituting the physical layers of Corson for the transmission lines of Schrodl in order to bring the teachings of Schrodl to wireless networks. The motivation for the combination is a simple substitution of one element for another to yield predictable results.

For claim 74, Schrodl discloses a method of transmission used in a transmission device included in a communication system transmitting a data frame by using a plurality of channels (abstract), the method comprising:

a transmission rate determination step of determining a transmission rate for each of the plurality of transmission lines (abstract extra information is added which basically determines an information transmission rate of each transmission line; and

A frame allotment step of dividing one data frame corresponding to each of the plurality of channels so that transmission burst times are substantially equal for the plurality of channels (abstract transmission lines have physical characteristics and clearly information units of the figure are the same size so the burst times will be the same.

For claim 74, Schrodl discloses all the subject matter of the claimed invention with the exception of the communication channels being wireless. In an analogous art, Corson et al. discloses a transmission device equipped with multiple physical layers (fig. 3). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Schrodl with those of Corson et al. by substituting the physical layers of Corson for the transmission lines of Schrodl in order to bring the teachings of Schrodl to wireless networks. The motivation for the combination is a simple substitution of one element for another to yield predictable results.

Claim 75 is rejected for essentially the same reason as claim 74. The frame of Schrodl can be considered to be classified into a first frame as it is split into cells of equal size. Furthermore the inclusion of a transmission rate determination step is considered to include the setting of a plurality of transmission rates for the two antennas. It is suggested to clarify the classification aspect of the claim.

Claims 78 and 79 are rejected for substantially the same reasoning as above as Corson et al. achieves multiple communication channels through multiple antennas.

Claim 80 is rejected for a reason analogous to claim 75.

Allowable Subject Matter

7. Claims 76, 77, 81 and 82 allowed. Claims 37-72 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art of record does not disclose data transmission over a plurality channels with different data rates such that the burst times are substantially equal as set forth in such a way that one of ordinary skill would be able to easily implement the technique with the 802.11 hardware. For claim 76, the prior art of record does not disclose the parallel transmission in common with setting of different rates depending from the multiple channels depending on the type of frame transmitted. Substantially similar reasoning applies to claim 81.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN MITCHELL whose telephone number is (571)270-3117. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Mitchell

/Nathan Mitchell/
Art Unit 2617
5/30/2008

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617